SYSTEM FOR MOUNTING A TOOL BIT IN A TOOL HOLDER

ABSTRACT OF THE INVENTION

A system for mounting a tool in a tool holder combining a means for high-precision centering of the tool and a means for positive restraint of the tool from rotation within the tool holder. The tool holder includes a cylindrical aperture having a diameter slightly less than the diameter of the shank of a cylindrical tool. The tool is installed into the tool holder by heating the tool holder to a temperature sufficient to increase the pocket diameter sufficiently to accept the tool shank. In a first shrink-fit embodiment, the tool shank is further provided with an angular flat for engagement with a set screw to prevent the tool from being turned in the holder in use. In a second shrink-fit embodiment, a groove extending partially around the tool receives a tangential pin through a passage in the tool holder. The tool is rotated in the holder until the pin binds in the groove, thus preventing any further rotation of the tool in the holder during use.